MATHEMATICA Policy Research



Registered Apprenticeship: A Promising Investment

In today's competitive economy, employers need a skilled workforce, and workers need education and training to succeed in high-quality, highpaying jobs. Operating for more than 75 years, the Registered Apprenticeship system provides flexible job training that combines technical instruction with structured, on-the-job learning experiences. Apprenticeship programs are designed to keep pace with innovation and technology to meet the changing needs of employers and workers. In 2012, new enrollment in Apprenticeship programs grew to more than 145,000 individuals nationwide, and more than 58,000 people completed their respective programs.

To determine whether the Registered Apprenticeship system is a good investment for states and the federal government, Mathematica Policy Research recently conducted a study of the system, focusing on whether its soci-

Individuals who participate in Registered Apprenticeship achieve a substantial increase in earnings and the government receives a positive return on investment.

etal benefits outweigh the costs. The study compared earnings of Registered Apprenticeship participants over a 10-year period (2000-2010) to earnings of people who did not participate in apprenticeship programs but who were similar in terms of earnings, employment history, and demographic characteristics (age, gender, race, and educational attainment). The study examined apprenticeship programs in 10 states with varying program features and labor market characteristics: Florida, Georgia, Iowa, Kentucky,

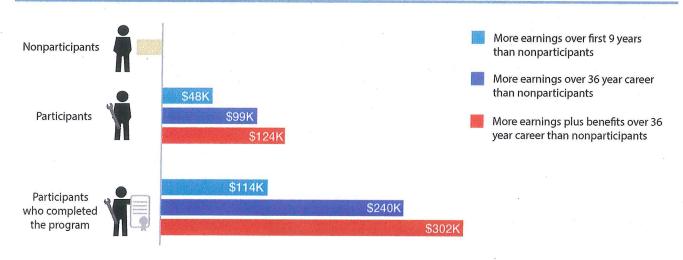
Maryland, Missouri, New Jersey, Ohio, Pennsylvania, and Texas.

Registered Apprenticeship Participants Earn More

Findings indicate that after enrollment, Registered Apprenticeship participants earned an average of \$47,586 more over the first nine-year period than similar individuals who did not participate in the Apprenticeship program. Participants who completed the program, roughly half of all who enrolled, earned an average of \$114,029 more in the nine-year period compared to nonparticipants. All dollar figures are inflation-adjusted to the year 2000, the first year of the study period.

The study also estimated the difference in earnings between Apprenticeship participants and nonparticipants over an entire career. Findings indicate

Average Gains in Earnings by Apprentices



Over the course of a 36-year career, apprenticeship participants who completed the program saw an earnings increase of more than \$300,000.

that a person who participated in the Apprenticeship system would earn an average of \$98,718 more than someone who did not participate (estimates are based on the earnings patterns observed for the first nine years following enrollment in the program). Individuals who completed a Registered Apprenticeship would earn an average of \$240,037 more than nonparticipants over their careers. If benefits such as health insurance are included in the calculation, individuals who completed the Apprenticeship program would earn an estimated \$301,533 more than

In 2012, more than 145,000 individuals became Apprentices nationwide.

people who did not participate. The study did not conclusively identify the impact of apprenticeships on earnings. Some, or even all, of the apprentices' higher earnings compared to other people's earnings may be due to differences in their pre-program skills or in their commitment to their career.

Earn and Learn: How Registered Apprenticeships Work

Registered Apprenticeship's "Earn and Learn" training model is designed to provide on-the-job training, related technical instruction, incremental wage increases as skills are attained, and, upon completion, nationally recognized certification in the chosen occupation. In many cases, the programs provide individuals with the opportunity to obtain secondary and postsecondary degrees. Apprentice programs are delivered by sponsors—employers, employer associations, and labor management organizations—that fund training, wages paid to apprentices,

and other program costs. For more details, see "About Apprenticeships" box on this page.

The Registered Apprenticeship system is administered by the U.S. Department of Labor's Office of Apprenticeship in conjunction with State Apprenticeship Agencies. The Office of Apprenticeship and state agencies register programs and apprentices; issue certificates of completion to apprentices;

on assumptions about unmeasured benefits and costs, including how much of an apprentice's productivity is assumed to be the result of participating in the program.

Not all gains are due to government investment. Even in the absence of government support for the Apprenticeship system, private employers would likely provide some sort of apprenticeship program. However,

About Apprenticeships

- Apprentice opportunities are available in over 1,000 occupations
- Traditionally, apprenticeships have been in the skilled trades, such as electrician, plumber, and carpenter
- Apprentice programs now include occupations such as truck driver, child care worker, nursing aide, and correctional officer
- Apprenticeships range from one to six years (majority are four years in length)

monitor programs for compliance and quality assurance; provide technical assistance; conduct outreach to potential sponsors; and build partnerships with sponsors, employers, education providers, and the workforce development system.

Future Outlook: Apprenticeships Offer High Return on Investment

The study findings indicate that the Registered Apprenticeship system provides a high return on investment for society. The main benefit is the value of the added productivity of workers who participated in the Apprenticeship system. The estimated benefit to society from one apprenticeship ranges from \$49,000 to \$124,000, depending

even if only 5 percent of the estimated gain in productivity is due to government investment, the net benefit of the government investment is about \$5,500.

This study was conducted with funding from the U.S. Department of Labor, Employment and Training Administration. A full version of the report is available at 21stcenturyapprenticeship. workforce3one.org.